

previously elected to pursue Claims 1-12 and canceled Claims 13-22 without prejudice or disclaimer. The Applicant also previously canceled Claims 3-5 and 9 without prejudice or disclaimer. The Applicant does not presently amend, cancel or add any claims. Accordingly, Claims 1-2, 6-8 and 10-12 are currently pending in the application.

I. Rejection of Claims 1, 2, 6-8 and 10-12 under 35 U.S.C. §103

The Examiner has rejected Claims 1, 2, 6-8 and 10-12 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,228,711 to Hsieh in view of U.S. Patent No. 6,207,560 to Lee. However, the combination of Hsieh and Lee fails to teach or suggest the invention recited in Claims 1 and 10, as discussed below.

Hsieh fails to teach or suggest forming at least two openings in a layer for a capacitor having a first electrode and a second electrode, each electrode being defined by an opening that extends through the layer and a stop layer included in the layer, as recited in Claim 1 and analogously in Claim 10. More specifically, Hsieh fails to teach or suggest a second capacitor electrode defined by an opening that extends through a layer and its stop layer. In contrast, Hsieh discloses two identical capacitors each having a first electrode 348a defined by a dual damascene opening 346 in dielectric layers 320, 326 and 330 and a second electrode 358 substantially defined by an opening in a hemispherical-grained silicon layer 350a employed as the capacitor dielectric. (FIG. 3I and 3J; column 6, lines 18-60). Thus, Hsieh teaches a second electrode 358 defined by an opening in the capacitor dielectric 350a, rather than in the layers 320, 326 and/or 330, as required by the claims of the present application. Moreover, Hsieh provides no suggestion, motivation or mere mention of forming an opening that defines a second capacitor electrode

because doing so would decrease capacitance values and increase capacitor spacing/size requirements, complexity and costs, in direct contrast to the objectives outlined in Hsieh. (Column 3, lines 15-33).

Furthermore, Lee adds nothing to Hsieh because Lee also fails to teach or suggest a second capacitor electrode defined by an opening that extends through a layer and a stop layer therein. In contrast, Lee discloses trenches 214, 216 and 218 and a via hole 224 formed only in an insulating layer 202, the trenches 214 and 216 being extending only partially into the insulating layer 202. (FIGs. 2A and 2B; column 3, lines 22-30). More specifically, Lee fails to disclose that the insulating layer 202 includes a stop layer, or that the trenches 214 and 216 extend through the insulating layer 202, as required by Claims 1 and 10 of the present application. Thus, Lee fails to teach first or second capacitor electrodes each defined by an opening that extends through a layer that includes a stop layer. Lee also fails to suggest such capacitor electrodes, because Lee is merely directed towards maintaining resistance values while decreasing resistor dimensions. (Column 1, lines 46-57).

Accordingly, the combination of Hsieh and Lee fails to teach or suggest each and every element recited in Claims 1 and 10 of the present application and, as such, fails to support a *prima facie* case of obviousness of Claims 1 and 10 and their dependent claims. Therefore, 1, 2, 6-8 and 10-12 are not obvious in view of the combination of Hsieh and Lee. Consequently, the Applicant respectfully requests the Examiner to withdraw the rejection.

II. Conclusion

In view of the foregoing remarks, the Applicant now sees all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicits a Notice of Allowance for Claims 1, 2, 6-8 and 10-12.

The Applicant requests the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application.

Respectfully submitted,

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FROM: Charles W. Gaines

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